

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2004/000212

International filing date (day/month/year)
19.01.2004

Priority date (day/month/year)
25.04.2003

International Patent Classification (IPC) or both national classification and IPC
G06F17/30

Applicant
MESSAGELABS LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/000212

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-8
	No: Claims	
Inventive step (IS)	Yes: Claims	1-8
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1. The following documents are referred to in this communication:

- D1: WIEGEL B ED - ASSOCIATION FOR COMPUTING MACHINERY: "SECURE EXTERNAL REFERENCES IN MULTIMEDIA EMAIL MESSAGES" 3RD. ACM CONFERENCE ON COMPUTER AND COMMUNICATIONS SECURITY. NEW DELHI, MAR. 14 - 16, 1996, ACM CONFERENCE ON COMPUTER AND COMMUNICATIONS SECURITY, NEW YORK, ACM, US, vol. CONF. 3, 14 March 1996 (1996-03-14), pages 11-18, XP000620973 ISBN: 0-89791-829-0
- D2: GREENFIELD P ET AL: "Access Prevention techniques for Internet Content Filtering" CSIRIO, December 1999 (1999-12), XP002265027
- D3: "LOOK AHEAD FILTERING OF INTERNET CONTENT" IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 40, no. 12, 1 December 1997 (1997-12-01), page 143, XP000754118 ISSN: 0018-8689

2. It is clear from the description on page 1, line 31 to page 2, line 17 that the additional features of claim 4 are essential to the solution of the technical problem as formulated on page 1, lines 16-30 of the application description. Indeed, if in claim 1 no action is taken, once the content scanner has determined that the external object is not acceptable, then the email receiver will receive the original email containing the original unmodified link to the unacceptable object. Thus, the method would not provide any protection against attempts to provide the email receiver with malicious pieces of information ("spam").

Since independent claim 1 does not contain the essential features of claim 4, it does not meet the requirement following from **Article 6 PCT** taken in combination with **Rule 6.3(b) PCT** that any independent claim must contain all the technical features essential to the definition of the invention.

Additionally, similar considerations can be put forward for the corresponding method claims 5 and 8. Finally, the following analysis of novelty and inventiveness will be carried out by considering claim 1 as containing also the features of claim 4 and considering claim 5 as containing the features of claim 8.

3.1 With respect to claim 1 document D1, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document):

an email system where email messages contain links to external multimedia objects, which are stored on a trusted server and protected by encryption (D1, pages 1-4).

3.2 The system disclosed by D1 does not ensure that the content security of documents embedding references to malicious external objects is checked (Technical Problem).

3.3 The invention solves this technical problem by means of:

means for causing a content scanner to scan objects referenced by links identified by a link analyser and to determine their acceptability according to predetermined rules, the means being operative, when the link is to an external object to the document is determined by the content scanner to be acceptable, the external object is retrieved and the document is modified by replacing the link to the external object by one to a copy of the object stored on a trusted server

a system wherein if any of the linked-to objects is determined by the content scanner to be unacceptable the document is flagged or modified to indicate that fact.

3.4. In the prior art document D1 the use of trusted servers is known. However, the server is "trusted" in the sense that it only ensures by means of special network mechanisms and protocols the integrity of messages, irrespective of their actual content. Indeed, D1 security mechanism does not take into account the actual content of the messages. Hence, the skilled person when faced with the Technical Problem would look for documents where the message content is checked. However, the standard solution of scanning the content of attached documents does not work in this case, the external object is not merely attached, but a link to it is included in the message. The skilled person would then turn to prior art documents disclosing methods that filter links to external objects. In the technical teaching of D3 the malicious link is simply deleted. However, since content scanning methods as known in the art are not fully reliable (that is, appropriate objects may be considered as not appropriate by mistake), the receiver of the document may lose relevant pieces of information. In the systems disclosed in D2 the link filtering is carried out on lists of predetermined links. The shortcoming of this approach is that it relies on this list to be regularly updated and maintained for the method to be effective, whereas the invention would for each link and each time check whether the content associated to the link is appropriate or not.

Hence, the subject matter claimed by claim 1 is novel (**Article 33(2) PCT**) and is not obvious to the person skilled in the art (**Article 33(3) PCT**).

3.3 Similar considerations with regard to **Articles 33(2) and 33(3) PCT** can be put forward for claims 5 and 8 which correspond in method terms to the subject matter of claims 1 and 4. Therefore, claim 5 and 8 are also new and inventive.

3.4 Dependent claims 2-3 and 6-7 are also new and inventive, since they depend on independent claims that are new and inventive.